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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XB132

Takes of Marine Mammals Incidental to Specified Activities; Russian River Estuary
Management Activities

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to the Sonoma County Water Agency (SCWA) to incidentally harass, by Level B harassment only, three species of marine mammals during estuary management activities conducted at the mouth of the Russian River, Sonoma County, California.

DATES: This authorization is effective for the period of one year, from April 21, 2012, through April 20, 2013.

ADDRESSES: A copy of the IHA and related documents are available by writing to Tammy Adams, Acting Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910.

A copy of the application containing a list of the references used in this document may be obtained by writing to the address specified above, telephoning the contact listed below (see FOR FURTHER INFORMATION CONTACT), or visiting the internet at:

<http://www.nmfs.noaa.gov/pr/permits/incidental.htm>. Supplemental documents provided by SCWA may also be found at the same address: Report of Activities and Monitoring Results (July 2009 to December 2011); Russian River Estuary Outlet Channel Adaptive Management Plan; and Feasibility of Alternatives to the Goat Rock State Beach Jetty for Managing Lagoon Water Surface Elevations – A Study Plan. NMFS’ Environmental Assessment (2010) and associated Finding of No Significant Impact, prepared pursuant to the National Environmental Policy Act, are available at the same site. Documents cited in this notice, including NMFS’ Biological Opinion (2008) on the effects of Russian River management activities on salmonids, may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Ben Laws, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is published in the Federal Register to provide public notice and initiate a 30-day comment period.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and other means of effecting the least practicable adverse impact

(i.e., mitigation) and requirements pertaining to monitoring and reporting of such takings are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by Level B harassment as defined below. Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization. If authorized, the IHA would be effective for one year from date of issuance.

Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as: "any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment]."

Summary of Request

NMFS received an application on January 27, 2012, from SCWA for issuance of an IHA for the taking, by Level B harassment only, of marine mammals incidental to ongoing activities conducted in management of the Russian River estuary in Sonoma County, California. SCWA was first issued an IHA, valid for a period of one year, on April 1, 2010 (75 FR 17382), and was subsequently issued a second IHA for incidental take associated with the same activities on April

21, 2011 (76 FR 23306). Management activities include management of a naturally-formed barrier beach at the mouth of the river in order to minimize potential for flooding of properties adjacent to the Russian River estuary and enhance habitat for juvenile salmonids, and biological and physical monitoring of the estuary. Flood control-related breaching of barrier beach at the mouth of the river may include artificial breaches, as well as construction and maintenance of a lagoon outlet channel. The latter activity, an alternative management technique conducted to mitigate impacts of flood control on rearing habitat for salmonids listed as threatened and endangered under the Endangered Species Act (ESA), occurs only from May 15 through October 15 (hereafter, the “lagoon management period”). All estuary management activities are conducted by SCWA in accordance with a Reasonable and Prudent Alternative (RPA) included in NMFS’ Biological Opinion (BiOp) for Water Supply, Flood Control Operations, and Channel Maintenance conducted in the Russian River watershed (NMFS, 2008). Species known from the haul-out at the mouth of the Russian River include the harbor seal (Phoca vitulina), California sea lion (Zalophus californianus), and northern elephant seal (Mirounga angustirostris).

Description of the Specified Activity

Breaching of naturally-formed barrier beach at the mouth of the Russian River requires the use of heavy equipment (e.g., bulldozer, excavator) and increased human presence. As a result, pinnipeds hauled out on the beach may exhibit behavioral responses that indicate incidental take by Level B harassment under the MMPA. Numbers of harbor seals, the species most commonly encountered at the haul-out, have been recorded extensively since 1972 at the haul-out near the mouth of the Russian River.

The estuary is located about 97 km (60 mi) northwest of San Francisco in Sonoma County, near Jenner, California (see Figure 1 of SCWA’s application). The Russian River

watershed encompasses 3,847 km² (1,485 mi²) in Sonoma, Mendocino, and Lake Counties. The mouth of the Russian River is located at Goat Rock State Beach; the estuary extends from the mouth upstream approximately 10 to 11 km (6-7 mi) between Austin Creek and the community of Duncans Mills (Heckel 1994). The proposed action involves management of the estuary to prevent flooding while avoiding adverse modification to critical habitat for ESA-listed salmonids. During the lagoon management period only, this involves construction and maintenance of a lagoon outlet channel that would facilitate formation of a perched lagoon, which will reduce flooding while maintaining appropriate conditions for juvenile salmonids. Additional breaches of barrier beach may be conducted for the sole purpose of reducing flood risk.

There are three components to SCWA's ongoing estuary management activities: (1) lagoon outlet channel management, during the lagoon management period only, required to accomplish the dual purposes of flood risk abatement and maintenance of juvenile salmonid habitat; (2) traditional artificial breaching, with the sole objective of flood risk abatement; and (3) physical and biological monitoring in and near the estuary, required under the terms of the BiOp, to understand response to water surface elevation management in the estuary-lagoon system. In addition to these ongoing management activities, SCWA will conduct new monitoring work at the mouth of the Russian River during the period of this IHA. This additional activity comprises a plan to study the effects of a historical, dilapidated jetty on the formation and maintenance of the Russian River estuary, as required under RPA 2 of the 2008 BiOp. Through several phases from 1929-1948, the jetty and associated seawall, roadway, and railroad were

constructed, reinforced and then abandoned by various entities. The plan for study of the jetty is described in greater detail in SCWA's 'Feasibility of Alternatives to the Goat Rock State Beach Jetty for Managing Lagoon Water Surface Elevations – A Study Plan' (ESA PWA, 2011a), available online (see Addresses).

SCWA's estuary management activities generally involve the use of heavy equipment and increased human presence on the beach, in order to excavate and maintain an outlet channel from the lagoon to the ocean or to conduct artificial breaching. Pupping season for harbor seals at the mouth of the Russian River typically peaks during May. However, pupping is known to begin in March and may continue through the end of June; pupping season for harbor seals is conservatively defined here as March 15 to June 30. During pupping season, management events may occur over a maximum of two consecutive days per event and all estuary management events on the beach must be separated by a minimum no-work period of one week. The use of heavy equipment and increased human presence has the potential to harass hauled-out marine mammals by causing movement or flushing into the water. Mitigation and monitoring measures described later in this document are designed to minimize this harassment to the lowest practicable level.

Equipment (e.g., bulldozer, excavator) is off-loaded in the parking lot of Goat Rock State Park and driven onto the beach via an existing access point. Personnel on the beach will include up to two equipment operators, three safety team members on the beach (one on each side of the channel observing the equipment operators, and one at the barrier to warn beach visitors away from the activities), and one safety team member at the overlook on Highway 1 above the beach. Occasionally, there will be two or more additional people on the beach (SCWA staff or regulatory agency staff) to observe the activities. SCWA staff will be followed by the equipment,

which will then be followed by an SCWA vehicle (typically a small pickup truck, to be parked at the previously posted signs and barriers on the south side of the excavation location).

Lagoon Outlet Channel Management

Active management of estuarine/lagoon water levels commences following the first closure of the barrier beach during this period. When this happens, SCWA monitors lagoon water surface elevation and creates an outlet channel when water levels in the estuary are between 4.5 and 7.0 ft (1.4-2.1 m) in elevation. Management practices will be incrementally modified over the course of the lagoon management period in an effort to improve performance in meeting the goals of the BiOp while preventing flooding.

Ideally, initial implementation of the outlet channel would produce a stable channel for the duration of the lagoon management period. However, the sheer number of variables and lack of past site-specific experience likely preclude this outcome, and succeeding excavation attempts may be required. The precise number of excavations would depend on uncontrollable variables such as seasonal ocean wave conditions (e.g., wave heights and lengths), river inflows, and the success of previous excavations (e.g., the success of selected channel widths and meander patterns) in forming an outlet channel that effectively maintains lagoon water surface elevations. Based on lagoon management operations under similar conditions at Carmel River, and expectations regarding how wave action and sand deposition may increase beach height or result in closure, it is predicted that up to three successive outlet channel excavation events, at increasingly higher beach elevations, may be necessary to produce a successful outlet channel. In the event that an outlet channel fails through breaching (i.e., erodes the barrier beach and forms a tidal inlet), SCWA would resume adaptive management of the outlet channel's width, slope, and alignment in consultation with NMFS and the California Department of Fish and Game (CDFG),

only after ocean wave action naturally reforms a barrier beach and closes the river's mouth during the lagoon management period.

Implementation and Maintenance – Upon successful construction of an outlet channel, adaptive management, or maintenance, may be required for the channel to continue achieving performance criteria. In order to reduce disturbance to seals and other wildlife, as well as beach visitors, the amount and frequency of mechanical intervention will be minimized. As technical staff and maintenance crews gain more experience with implementing the outlet channel and observing its response, maintenance is anticipated to be less frequent, with events of lesser intensity. During pupping season, machinery may only operate on up to two consecutive working days, including during initial construction of the outlet channel. In addition, SCWA must maintain a one week no-work period between management events during pupping season, unless flooding is a threat, to allow for adequate disturbance recovery period. During the no-work period, equipment must be removed from the beach. SCWA seeks to avoid conducting management activities on weekends (Friday-Sunday) in order to reduce disturbance of beach visitors. In addition, activities are to be conducted in such a manner as to effect the least practicable adverse impacts to pinnipeds and their habitat as described later in this document (see “Mitigation”).

Artificial Breaching

The estuary may close naturally throughout the year as a result of barrier beach formation at the mouth of the Russian River. Although closures may occur at any time of the year, the mouth usually closes during the spring, summer, and fall (Heckel 1994; Merritt Smith Consulting 1997, 1998, 1999, 2000; SCWA and Merritt Smith Consulting 2001). Closures result in lagoon formation in the estuary and, as water surface levels rise, flooding may occur. For

decades, artificial breaching has been performed in the absence of natural breaching, in order to alleviate potential flooding of low-lying shoreline properties near the town of Jenner. Artificial breaching, as defined here, is conducted for the sole purpose of reducing flood risk, and thus is a different type of event, from an engineering perspective, than are the previously described lagoon management events. Artificial breaching activities occur in accordance with the BiOp, and primarily occur outside the lagoon management period (i.e., artificial breaching would primarily occur from October 16 to May 14). However, if conditions present unacceptable risk of flooding during the lagoon management period, SCWA may artificially breach the sandbar a maximum of two times during that period. Implementation protocol would follow that described previously for lagoon outlet channel management events, with the exception that only one piece of heavy equipment is likely to be required per event, rather than two.

Physical and Biological Monitoring

SCWA is required by the BiOp and other state and federal permits to collect biological and physical habitat data in conjunction with estuary management. Monitoring requires the use of boats and nets in the estuary, among other activities, and will require activities to occur in the vicinity of beach and river haul-outs (see Figure 4 of SCWA's application); these monitoring activities have the potential to disturb pinnipeds. The majority of monitoring is required under the BiOp and occurs approximately during the lagoon management period (mid-May through October or November), depending on river dynamics. Beach topographic surveys occur year-round.

Jetty Study

The jetty study will analyze the effects of the jetty on beach permeability and sand storage and transport. These physical processes are affected by the jetty, and, in turn, may affect

seasonal water surface elevations and flood risk. Evaluating and quantifying these linkages will inform the development and evaluation of management alternatives for the jetty. The study involves delineation of two study transects perpendicular to the beach barrier (see Figure 5 of SCWA's application), with six water seepage monitoring wells be constructed (three per transect). In addition, geophysical surveys will be conducted in order to better understand the characteristics of the barrier beach substrate and the location and composition of buried portions of the jetty and associated structures. Once the initial geophysical surveys have been completed, additional surface electromagnetic profiles will be collected along the barrier beach in order to explore how the jetty impacts beach seepage relative to the natural beach berm.

Comments and Responses

NMFS published a notice of receipt of SCWA's application and proposed IHA in the Federal Register on March 16, 2012 (77 FR 15722). During the 30-day comment period, NMFS received a letter from the Marine Mammal Commission (MMC). The MMC recommended that NMFS issue the requested authorization, subject to inclusion of the proposed mitigation and monitoring measures as described in NMFS' notice of proposed IHA and the application. All measures proposed in the initial Federal Register notice are included within the authorization and NMFS has determined that they will effect the least practicable impact on the species or stocks and their habitats.

Description of Marine Mammals in the Area of the Specified Activity

The marine mammal species that may be harassed incidental to estuary management activities are the harbor seal, California sea lion, and the northern elephant seal. None of these species are listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. NMFS presented a more detailed discussion of the status of these

stocks and their occurrence in the action area in the notice of the proposed IHA (77 FR 15722, March 16, 2012).

Potential Effects of the Specified Activity on Marine Mammals

NMFS provided a detailed discussion of the potential effects of the specified activity on marine mammals in the notice of the proposed IHA (77 FR 15722, March 16, 2012). A summary of anticipated effects is provided below.

A significant body of monitoring data exists for pinnipeds at the mouth of the Russian River. Pinnipeds have co-existed with regular estuary management activity for decades, as well as with regular human use activity at the beach, and are likely habituated to human presence and activity. Nevertheless, SCWA's estuary management activities have the potential to harass pinnipeds present on the beach. During breaching operations, past monitoring has revealed that some or all of the seals present typically move or flush from the beach in response to the presence of crew and equipment, though some may remain hauled-out. No stampeding of seals – a potentially dangerous occurrence in which large numbers of animals succumb to mass panic and rush away from a stimulus – has been documented since SCWA developed protocols to prevent such events in 1999. While it is likely impossible to conduct required estuary management activities without provoking some response in hauled-out animals, precautionary mitigation measures, described later in this document, ensure that animals are gradually apprised of human approach. Under these conditions, seals typically exhibit a continuum of responses, beginning with alert movements (e.g., raising the head), which may then escalate to movement away from the stimulus and possible flushing into the water. Flushed seals typically re-occupy the haul-out within minutes to hours of the stimulus. In addition, eight other haul-outs exist nearby that may accommodate flushed seals. In the absence of appropriate mitigation measures,

it is possible that pinnipeds could be subject to injury, serious injury, or mortality, likely through stampeding or abandonment of pups.

California sea lions and northern elephant seals, which have been noted only infrequently in the action area, have been observed as less sensitive to stimulus than harbor seals during monitoring at numerous other sites. For example, monitoring of pinniped disturbance as a result of abalone research in the Channel Islands showed that while harbor seals flushed at a rate of 69 percent, California sea lions flushed at a rate of only 21 percent. The rate for elephant seals declined to 0.1 percent (VanBlaricom, 2011). In the unlikely event that either of these species is present during management activities, they would be expected to display a minimal reaction to maintenance activities – less than that expected of harbor seals.

Although the Jenner haul-out is not known as a primary pupping beach, harbor seal pups have been observed during the pupping season; therefore, NMFS has evaluated the potential for injury, serious injury or mortality to pups. There is a lack of published data regarding pupping at the mouth of the Russian River, but SCWA monitors have observed pups on the beach. No births were observed during monitoring in 2010-11, but were inferred based on signs indicating pupping (e.g., blood spots on the sand, birds consuming possible placental remains). Pup injury or mortality would be most likely to occur in the event of extended separation of a mother and pup, or trampling in a stampede. As discussed previously, no stampedes have been recorded since development of appropriate protocols in 1999. Any California sea lions or northern elephant seals present would be independent juveniles or adults; therefore, analysis of impacts on pups is not relevant for those species. Pups less than one week old are characterized by being up to 15 kg, thin for their body length, or having an umbilicus or natal pelage.

Similarly, the period of mother-pup bonding, critical time needed to ensure pup survival and maximize pup health, is not expected to be impacted by estuary management activities. Harbor seal pups are extremely precocious, swimming and diving immediately after birth and throughout the lactation period, unlike most other phocids which normally enter the sea only after weaning (Lawson and Renouf, 1985; Cottrell et al., 2002; Burns et al., 2005). Lawson and Renouf (1987) investigated harbor seal mother-pup bonding in response to natural and anthropogenic disturbance. In summary, they found that the most critical bonding time is within minutes after birth. Although pupping season is defined as March 15-June 30, the peak of pupping season is typically concluded by mid-May, when the lagoon management period begins. As such, it is expected that most mother-pup bonding would likely be concluded as well. The number of management events during the months of March and April has been relatively low in the past, and the breaching activities occur in a single day over several hours. In addition, mitigation measures described later in this document further reduce the likelihood of any impacts to pups, whether through injury or mortality or interruption of mother-pup bonding.

Therefore, based on a significant body of site-specific monitoring data, harbor seals are unlikely to sustain any harassment that may be considered biologically significant. Individual animals would, at most, flush into the water in response to maintenance activities but may also simply become alert or move across the beach away from equipment and crews. NMFS has determined that impacts to hauled-out pinnipeds during estuary management activities would be behavioral harassment of limited duration (i.e., less than one day) and limited intensity (i.e., temporary flushing at most). Stampeding, and therefore injury or mortality, is not expected – nor been documented – in the years since appropriate protocols were established (see “Mitigation”

for more details). Further, the continued, and increasingly heavy, use of the haul-out despite decades of breaching events indicates that abandonment of the haul-out is unlikely.

Anticipated Effects on Habitat

NMFS provided a detailed discussion of the potential effects of this action on marine mammal habitat in the notice of the proposed IHA (77 FR 15722, March 16, 2012). SCWA's estuary management activities will result in temporary physical alteration of the Jenner haul-out. With barrier beach closure, seal usage of the beach haul-out declines, and the three nearby river haul-outs may not be available for usage due to rising water surface elevations. Breaching of the barrier beach, subsequent to the temporary habitat disturbance, will likely increase suitability and availability of habitat for pinnipeds. Biological and water quality monitoring will not physically alter pinniped habitat. In summary, there will be temporary physical alteration of the beach. However, natural opening and closure of the beach results in the same impacts to habitat; therefore, seals are likely adapted to this cycle. In addition, the increase in rearing habitat quality has the goal of increasing salmon abundance, ultimately providing more food for seals present within the action area.

Summary of Previous Monitoring

SCWA complied with the mitigation and monitoring required under the previous authorization. In accordance with the 2011 IHA, SCWA submitted a Report of Activities and Monitoring Results, covering the period of July 2009 through December 2011. Under the 2011 IHA, SCWA did not conduct any estuary management events, but did conduct associated biological and physical monitoring. During the course of these activities, SCWA did not exceed the take levels authorized under the 2011 IHA. NMFS provided a detailed description of previous monitoring results in the notice of the proposed IHA (77 FR 15722, March 16, 2012).

Mitigation

In order to issue an IHA under Section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses.

SCWA will continue the following mitigation measures, as implemented during the previous IHA, designed to minimize impact to affected species and stocks:

- SCWA crews will cautiously approach the haul-out ahead of heavy equipment to minimize the potential for sudden flushes, which may result in a stampede – a particular concern during pupping season.
- SCWA staff will avoid walking or driving equipment through the seal haul-out.
- Crews on foot will make an effort to be seen by seals from a distance, if possible, rather than appearing suddenly at the top of the sandbar, again preventing sudden flushes.
- During breaching events, all monitoring will be conducted from the overlook on the bluff along Highway 1 adjacent to the haul-out in order to minimize potential for harassment.
- A water level management event may not occur for more than two consecutive days unless flooding threats cannot be controlled.

In addition, SCWA will continue mitigation measures specific to pupping season (March 15-June 30), as implemented in the previous IHA:

- SCWA will maintain a 1 week no-work period between water level management events (unless flooding is an immediate threat) to allow for an adequate disturbance recovery period. During the no-work period, equipment must be removed from the beach.

- If a pup less than 1 week old is on the beach where heavy machinery will be used or on the path used to access the work location, the management action will be delayed until the pup has left the site or the latest day possible to prevent flooding while still maintaining suitable fish rearing habitat. In the event that a pup remains present on the beach in the presence of flood risk, SCWA will consult with NMFS and CDFG to determine the appropriate course of action. SCWA will coordinate with the locally established seal monitoring program (Stewards' Seal Watch) to determine if pups less than 1 week old are on the beach prior to a breaching event.

- Physical and biological monitoring will not be conducted if a pup less than 1 week old is present at the monitoring site or on a path to the site.

Equipment will be driven slowly on the beach and care will be taken to minimize the number of shutdowns and start-ups when the equipment is on the beach. All work will be completed as efficiently as possible, with the smallest amount of heavy equipment possible, to minimize disturbance of seals at the haul-out. Boats operating near river haul-outs during monitoring will be kept within posted speed limits and driven as far from the haul-outs as safely possible to minimize flushing seals.

NMFS has carefully evaluated the applicant's mitigation measures as proposed and considered their effectiveness in past implementation, to determine whether they are likely to effect the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures includes consideration of the following factors in relation to one another: (1) the manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals, (2) the proven or likely efficacy of the specific measure to minimize adverse impacts

as planned; (3) the practicability of the measure for applicant implementation, including consideration of personnel safety, and practicality of implementation.

Injury, serious injury, or mortality to pinnipeds would likely result from startling animals inhabiting the haul-out into a stampede reaction, or from extended mother-pup separation as a result of such a stampede. Long-term impacts to pinniped usage of the haul-out could result from significantly increased presence of humans and equipment on the beach. To avoid these possibilities, NMFS and SCWA have developed the previously described mitigation measures. These are designed to reduce the possibility of startling pinnipeds, by gradually apprising them of the presence of humans and equipment on the beach, and to reduce the possibility of impacts to pups by eliminating or altering management activities on the beach when pups are present and by setting limits on the frequency and duration of events during pupping season. During the past twelve years of flood control management, implementation of similar mitigation measures has resulted in no known stampede events and no known injury, serious injury, or mortality. Over the course of that time period, management events have generally been infrequent and of limited duration. Based upon the SCWA's record of management at the mouth of the Russian River, as well as information from monitoring SCWA's implementation of the improved mitigation measures as prescribed under the previous IHA, NMFS has determined that the mitigation measures included in the final IHA provide the means of effecting the least practicable adverse impacts on marine mammal species or stocks and their habitat.

Monitoring and Reporting

In order to issue an ITA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must set forth "requirements pertaining to the monitoring and reporting of such taking". The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for IHAs

must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present.

The applicant has developed a Pinniped Monitoring Plan which describes the proposed monitoring efforts. The purpose of this monitoring plan, which is carried out collaboratively with the Stewards of the Coasts and Redwoods (Stewards) organization, is to detect the response of pinnipeds to estuary management activities at the Russian River estuary. SCWA has designed the plan both to satisfy the requirements of the IHA, and to address the following questions of interest:

1. Under what conditions do pinnipeds haul out at the Russian River estuary mouth at Jenner?
2. How do seals at the Jenner haul-out respond to activities associated with the construction and maintenance of the lagoon outlet channel and artificial breaching activities?
3. Does the number of seals at the Jenner haul-out significantly differ from historic averages with formation of a summer (May 15 to October 15) lagoon in the Russian River estuary?
4. Are seals at the Jenner haul-out displaced to nearby river and coastal haul-outs when the mouth remains closed in the summer?

In summary, monitoring includes the following:

Baseline Monitoring

Seals at the Jenner haul-out are counted twice monthly for the term of the IHA. This baseline information will provide SCWA with details that may help to plan estuary management activities in the future to minimize pinniped interaction. This census begins at local dawn and

continues for 8 hours. All seals hauled out on the beach are counted every 30 minutes from the overlook on the bluff along Highway 1 adjacent to the haul-out using high powered spotting scopes. Monitoring may conclude for the day if weather conditions affect visibility (e.g., heavy fog in the afternoon). Counts are scheduled for 2 days out of each month, with the intention of capturing a low and high tide each in the morning and afternoon. Depending on how the sandbar is formed, seals may haul out in multiple groups at the mouth. At each 30-minute count, the observer indicates where groups of seals are hauled out on the sandbar and provides a total count for each group. If possible, adults and pups are counted separately.

In addition to the census data, disturbances of the haul-out are recorded. The method for recording disturbances follows those in Mortenson (1996). Disturbances will be recorded on a three-point scale that represents an increasing seal response to the disturbance. The time, source, and duration of the disturbance, as well as an estimated distance between the source and haul-out, are recorded. It should be noted that only responses falling into Mortenson's Levels 2 and 3 (i.e., movement or flight) will be considered as harassment under the MMPA. Weather conditions are recorded at the beginning of each census. These include temperature, percent cloud cover, and wind speed (Beaufort scale). Tide levels and estuary water surface elevations are correlated to the monitoring start and end times.

In an effort towards understanding possible relationships between use of the Jenner haul-out and nearby coastal and river haul-outs, several other haul-outs on the coast and in the Russian River estuary are monitored as well. The peripheral haul-outs are visited for 10-minute counts twice during each baseline monitoring day. All pinnipeds hauled out were counted from the same vantage point(s) at each haul-out using a high-powered spotting scope or binoculars.

Estuary Management Event Monitoring

Activities associated with artificial breaching or initial construction of the outlet channel, as well as the maintenance of the channel that may be required, will be monitored for disturbances to the seals at the Jenner haul-out. A 1-day pre-event channel survey will be made within 1-3 days prior to constructing the outlet channel. The haul-out will be monitored on the day the outlet channel is constructed and daily for up to the maximum 2 days allowed for channel excavation activities. Monitoring will also occur on each day that the outlet channel is maintained using heavy equipment for the duration of the lagoon management period. Monitoring will correspond with that described under the “Baseline” section previously, with the exception that management activity monitoring duration is defined by event duration, rather than being set at 8 hours. On the day of the management event, pinned monitoring begins at least 1 hour prior to the crew and equipment accessing the beach work area and continues through the duration of the event, until at least 1 hour after the crew and equipment leave the beach.

In an attempt to understand whether seals from the Jenner haul-out are displaced to coastal and river haul-outs nearby when management events occur, other nearby haul-outs are monitored concurrently with event monitoring. This provides an opportunity to qualitatively assess whether these haul-outs are being used by seals displaced from the Jenner haul-out. This monitoring will not provide definitive results regarding displacement to nearby coastal and river haul-outs, as individual seals are not marked, but is useful in tracking general trends in haul-out use during disturbance. As volunteers are required to monitor these peripheral haul-outs, haul-out locations may need to be prioritized if there are not enough volunteers available. In that case, priority will be assigned to the nearest haul-outs (North Jenner and Odin Cove), followed by the Russian River estuary haul-outs, and finally the more distant coastal haul-outs.

For all counts, the following information will be recorded in thirty minute intervals: (1) pinniped counts, by species; (2) behavior; (3) time, source and duration of any disturbance; (4) estimated distances between source of disturbance and pinnipeds; (5) weather conditions (e.g., temperature, wind); and (5) tide levels and estuary water surface elevation.

Monitoring During Pupping Season – As described previously, the pupping season is defined as March 15 to June 30. Baseline, lagoon outlet channel, and artificial breaching monitoring during the pupping season will include records of neonate (pups less than 1 week old) observations. Characteristics of a neonate pup include: body weight less than 15 kg; thin for their body length; an umbilicus or natal pelage present; wrinkled skin; and awkward or jerky movements on land. SCWA will coordinate with the Seal Watch monitoring program to determine if pups less than 1 week old are on the beach prior to a water level management event.

If, during monitoring, observers sight any pup that might be abandoned, SCWA will contact the NMFS stranding response network immediately and also report the incident to NMFS' Southwest Regional Office and NMFS Office of Protected Resources within 48 hours. Observers will not approach or move the pup. Potential indications that a pup may be abandoned are no observed contact with adult seals, no movement of the pup, and the pup's attempts to nurse are rebuffed.

Reporting

SCWA is required to submit a report on all activities and marine mammal monitoring results to the Office of Protected Resources, NMFS, and the Southwest Regional Administrator, NMFS, 90 days prior to the expiration of the IHA if a renewal is sought, or within 90 days of the expiration of the permit otherwise. This annual report will also be distributed to California State

Parks and Stewards, and would be available to the public on SCWA's website. This report will contain the following information:

- The number of seals taken, by species and age class (if possible);
- Behavior prior to and during water level management events;
- Start and end time of activity;
- Estimated distances between source and seals when disturbance occurs;
- Weather conditions (e.g., temperature, wind, etc.);
- Haul-out reoccupation time of any seals based on post activity monitoring;
- Tide levels and estuary water surface elevation; and
- Seal census from bi-monthly and nearby haul-out monitoring.

The annual report includes descriptions of monitoring methodology, tabulation of estuary management events, summary of monitoring results, and discussion of problems noted and proposed remedial measures. SCWA will report any injured or dead marine mammals to NMFS' Southwest Regional Office and NMFS Office of Protected Resources.

Estimated Take by Incidental Harassment

NMFS is authorizing SCWA to take harbor seals, California sea lions, and northern elephant seals, by Level B harassment only, incidental to estuary management activities. These activities, involving increased human presence and the use of heavy equipment and support vehicles, are expected to harass pinnipeds present at the haul-out through behavioral disturbance only. In addition, monitoring activities prescribed in the BiOp may result in harassment of additional individuals at the Jenner haul-out and at the three haul-outs located in the estuary. Estimates of the number of harbor seals, California sea lions, and northern elephant seals that may be harassed by the activities is based upon the number of potential events associated with

Russian River estuary management activities and the average number of individuals of each species that are present during conditions appropriate to the activity. As described previously in this document, monitoring effort at the mouth of the Russian River has shown that the number of seals utilizing the haul-out declines during bar-closed conditions. Tables 1 and 2 detail the total number of authorized takes. Methodology of take estimation was discussed in detail in NMFS' notice of proposed IHA (77 FR 15722, March 16, 2012). Please note that the take estimates provided in NMFS' notice of proposed IHA (Tables 5-6 in that document) contained several errors, which are corrected here.

Table 1. Estimated number of harbor seal takes resulting from Russian River estuary management activities

Number of animals expected to occur ^a	Number of events ^{b,c}	Potential total number of individual animals that may be taken
Lagoon Outlet Channel Management (May 15 to October 15)		
Implementation: 105 ^d	Implementation: 3	Implementation: 315
Maintenance and Monitoring: May: 103 June: 100 July: 105 Aug: 17 Sept: 19 Oct: 22	Maintenance: May: 1 June-Sept: 4/month Oct: 1	Maintenance: 1,089
	Monitoring: June-Sept: 2/month Oct: 1	Monitoring: 504
		Total: 1,908
Artificial Breaching		
Oct: 22	Oct: 2	Oct: 44
Nov: 11	Nov: 2	Nov: 22
Dec: 45	Dec: 2	Dec: 90
Jan: 96	Jan: 1	Jan: 96
Feb: 89	Feb: 1	Feb: 89
Mar: 146	Mar: 1	Mar: 146
Apr: 173	Apr: 1	Apr: 173
May: 103	May: 1	May: 103
	11 events maximum	Total: 763
Topographic and Geophysical Beach Surveys		
Jan: 96 Feb: 89 Mar: 146 Apr: 131 May: 119 Jun: 134 Jul: 237 Aug: 108 Sep: 36 Oct: 36 Nov: 90	1 topographic survey/month 2 geophysical surveys/month, Sep-Dec; 1/month, Jul-Aug, Jan-Feb Surveys considered to have potential for take of 10 percent of animals present	Jan: 20 Feb: 18 Mar: 15 Apr: 13 May: 12 Jun: 13 Jul: 48 Aug: 22 Sep: 12 Oct: 12 Nov: 27

Dec: 45		Dec: 15 Total: 227
Biological and Physical Habitat Monitoring in the Estuary		
1 ^e	65	65
Total		2,963

^a For lagoon outlet channel management and artificial breaching events occurring from April through November, average daily number of animals is from observations at the mouth of the Russian River during breaching events (i.e., bar-closed conditions). For artificial breaching events occurring from December through March, and for all topographic and geophysical beach surveys, average daily number of animals is from observations at Russian River mouth during bar-open conditions, 2009-11.

^b For implementation of the lagoon outlet channel, an event is defined as a single, two-day episode. It is assumed that the same individual seals would be hauled out during a single event. For the remaining activities, an event is defined as a single day on which an activity occurs. Some events may include multiple activities.

^c Number of events for artificial breaching derived from historical data. The average number of events for each month was rounded up to the nearest whole number; estimated number of events for December was increased from one to two because multiple closures resulting from storm events have occurred in recent years during that month. These numbers likely represent an overestimate, as the average annual number of events is six.

^d Although implementation could occur at any time during the lagoon management period, the highest daily average from any month during the lagoon management period was used.

^e Based on past experience, SCWA expects that no more than one seal may be present, and thus have the potential to be disturbed, at each of the three river haul-outs.

Table 2. Estimated number of California sea lion and elephant seal takes resulting from Russian River estuary management activities

Species	Number of animals expected to occur	Number of events	Potential total number of individual animals that may be taken
Lagoon Outlet Channel Management (May 15 to October 15)			
California sea lion (potential to encounter once per event)	1	3	3
Northern elephant seal (potential to encounter once per event)	1	3	3
Artificial Breaching			
California sea lion (potential to encounter once per event, Sep-Apr)	1	10	10
Northern elephant seal (potential to encounter once per event, Dec-May)	1	7	7
Topographic and Geophysical Beach Surveys			
California sea lion (potential to encounter once per event, Sept-Apr)	1	18	18
Northern elephant seal (potential to encounter once per event, Dec-May)	1	10	10
Biological and Physical Habitat Monitoring in the Estuary			
California sea lion (potential to encounter once per month, Sept-Apr)	1	8	8
Total			
California sea lion			37
Elephant seal			20

Negligible Impact and Small Numbers Analysis and Determination

NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." In determining whether or not authorized incidental take will have a negligible impact on affected species stocks, NMFS considers a number of criteria regarding the impact of the proposed action, including the number, nature, intensity, and duration of Level B harassment take that may occur. Although SCWA's estuary management activities may harass pinnipeds hauled out at the mouth of the Russian River, as well as those hauled out at several locations in the estuary during recurring monitoring activities, impacts are occurring to a small, localized group of animals. No mortality or injury is anticipated, nor will the action result in long-term impacts such as permanent abandonment of the haul-out. Seals will likely become alert or, at most, flush into the water in reaction to the presence of crews and equipment on the beach. However, breaching the sandbar has been shown to increase seal abundance on the beach, with seals quickly re-inhabiting the haul-out following cessation of activity. In addition, the implementation of the lagoon management plan may provide increased availability of prey species (salmonids). No impacts are expected at the population or stock level.

No pinniped stocks known from the action area are listed as threatened or endangered under the ESA or determined to be strategic or depleted under the MMPA. Recent data suggests that harbor seal populations have reached carrying capacity; populations of California sea lions and northern elephant seals in California are also considered healthy.

The number of animals authorized to be taken for each species of pinnipeds can be considered small relative to the population size. There are an estimated 34,233 harbor seals in the California stock, 238,000 California sea lions, and 124,000 northern elephant seals in the

California breeding population. Based on extensive monitoring effort specific to the affected haul-out and historical data on the frequency of the specified activity, NMFS is authorizing take, by Level B harassment only, of 2,963 harbor seals, 37 California sea lions, and 20 northern elephant seals, representing 8.7, 0.02, and 0.02 percent of the populations, respectively. However, this represents an overestimate of the number of individuals harassed over the duration of the proposed IHA, because the take estimates include multiple instances of harassment to a given individual.

California sea lion and elephant seal pups are not known to occur within the action area and thus will not be affected by the specified activity. The action is not likely to cause injury or mortality to any harbor seal pup, nor will it impact mother-pup bonding. The peak of harbor seal pupping season occurs during May, when few management activities are anticipated. However, the pupping season has been conservatively defined as March 15-June 30 for mitigation purposes, and any management activity that is required during pupping season will be delayed in the event that a pup less than one week old is present on the beach. As described previously in this document, harbor seal pups are precocious, and mother-pup bonding is likely to occur within minutes. Delay of events will further ensure that mother-pup bonding is not likely to be interfered with.

Based on the foregoing analysis, behavioral disturbance to pinnipeds at the mouth of the Russian River will be of low intensity and limited duration. To ensure minimal disturbance, SCWA will implement the mitigation measures described previously, which NMFS has determined will serve as the means for effecting the least practicable adverse effect on marine mammals stocks or populations and their habitat. NMFS finds that SCWA's estuary management activities will result in the incidental take of small numbers of marine mammals, and that the

authorized number of takes will have no more than a negligible impact on the affected species and stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action.

Endangered Species Act (ESA)

There are no ESA-listed marine mammals found in the action area; therefore, no consultation under the ESA is required. As described elsewhere in this document, SCWA and the Corps consulted with NMFS under section 7 of the ESA regarding the potential effects of their operations and maintenance activities, including SCWA's estuary management program, on ESA-listed salmonids. As a result of this consultation, NMFS issued the Russian River Biological Opinion (NMFS, 2008) and RPA, which prescribes modifications to SCWA's estuary management activities.

National Environmental Policy Act (NEPA)

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500-1508), and NOAA Administrative Order 216-6, NMFS prepared an Environmental Assessment (EA) to consider the direct, indirect and cumulative effects to the human environment resulting from issuance of an IHA to SCWA. NMFS signed a Finding of No Significant Impact (FONSI) on March 30, 2010. NMFS has reviewed SCWA's application and determined that there are no substantial changes to the proposed action and that there are no new direct, indirect, or cumulative effects to the human environment resulting from renewal of an IHA to SCWA. Therefore, NMFS has determined that a new or supplemental EA or Environmental Impact Statement is unnecessary, and reaffirms the existing FONSI for this

action. The existing EA and FONSI for this action are available for review at <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>.

Determinations

NMFS has determined that the impact of conducting the specific estuary management activities described in this notice and in the IHA request in the specific geographic region in Sonoma County, California may result, at worst, in a temporary modification in behavior (Level B harassment) of small numbers of marine mammals. Further, this activity is expected to result in a negligible impact on the affected species or stocks of marine mammals. The provision requiring that the activity not have an unmitigable impact on the availability of the affected species or stock of marine mammals for subsistence uses is not implicated for this action.

Authorization

As a result of these determinations, NMFS has issued an IHA to SCWA to conduct estuary management activities in the Russian River from the period of April 21, 2012, through April 20, 2013, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: April 17, 2012.

Helen M. Golde,
Acting Director,
Office of Protected Resources,
National Marine Fisheries Service.

